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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/900,777	07/06/2001	Michael K. Brand	12177/21201	7690

7590 02/05/2007

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EXAMINER	
GEBRESILASSIE, KIBROM K	
ART UNIT	PAPER NUMBER
2128	
MAIL DATE	DELIVERY MODE
02/05/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

Supplemental **Notice of Allowability**	**Application No.** 09/900,777	**Applicant(s)** BRAND ET AL.	
	Examiner Kibrom K. Gebresilassie	**Art Unit** 2128	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *Supplemental to the action mailed on October 26, 2006*.

2. ☒ The allowed claim(s) is/are *1-9,11-19,21 and 22*.

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☐ All b) ☐ Some* c) ☐ None of the:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date *01/23/07 &01/24/07* .
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

KAMINI SHAH
SUPERVISORY PATENT EXAMINER

SUPPLEMENTAL ACTION

1. This communication is responsive to an interview conducted on January 23, 2007 and January 24, 2007 and supplemental to the action mailed on October 26, 2006.

2. Examiner and applicant's representative conducted a telephone interview and discussed regarding 101 issue of the claims. Examiner suggested that the claims should be amended in order to overcome 101 rejection and to have a tangible result. It is therefore applicant's representative authorized examiner to amend the claims accordingly. The amended claims are attached.

EXAMINER'S AMENDMENT

3. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Robert L. Hails on 01/23/2007 and 01/24/2007.

The application has been amended as follows:

In the Claims:

As per Claim 1 (Currently Amended).

A ~~machine readable medium storing computer executable instructions to perform a~~ method of estimating a life of a product, the method comprising:

identifying a product defect,

determining accelerated stress testing data for the product using the relationship $tF = AF \times tA^2$, where tF = a failure time on a field use time scale, AF = an acceleration

factor, and tA = failure time on an accelerated time scale, the accelerated stress testing data representing the response of the product operating in a first environment; ~~and~~

calculating the mean time between failures (MTBF) for the product operating in a second environment based on the accelerated stress testing data; and

correcting the product defect by redesigning the product and producing redesigned product.

As per Claim 2 (Currently Amended)

The method ~~machine-readable medium~~ of claim 1, wherein said first environment is more likely than the second environment to cause the product to fail.

As per Claim 3 (Currently Amended)

The method ~~machine-readable medium~~ of claim 1, wherein the accelerated stress testing data represents the length of time the product operates in the first environment before the product fails.

As per Claim 4 (Currently Amended)

The method ~~machine-readable medium~~ of claim 1, wherein the accelerated stress testing data is derived from a plurality of different stress tests.

As per Claim 5 (Currently Amended)

The method ~~machine-readable medium~~ of claim 4, wherein the plurality of different stress tests includes a temperature test and a vibrational test.

As per Claim 6 (Currently Amended)

The method ~~machine-readable medium~~ of claim 1, the method further comprising calculating upper and lower confidence limits for the MTBF calculation.

As per Claim 7 (Currently Amended)

The method ~~machine-readable medium~~ of claim 1, wherein said accelerated stress testing data is determined at least in part from bill of materials (BOM) information on the product.

As per Claim 8 (Currently Amended)

The method ~~machine-readable medium~~ of claim 1, wherein said step of calculating is performed during the design of the product.

As per Claim 9 (Currently Amended)

The method ~~machine-readable medium~~ of claim 1, wherein said step of calculating is performed prior to manufacturing the product for commercial use.

As per Claim 10 (Canceled)

As per Claim 11 (Currently Amended)

The method ~~machine-readable medium~~ of claim 1, wherein the accelerated stress testing data includes accelerated stress testing data for a previous design of the product.

As per Claim 12 (Currently Amended)

The method ~~machine-readable medium~~ of claim 11, wherein the accelerated stress testing data for the previous design of the product is derived from stress testing in an environment less likely to cause failure than said first environment.

As per Claim 13 (Currently Amended)

The method ~~machine-readable medium~~ of claim 11, the method further comprising calculating a change in MTBF from the previous design of the product.

As per Claim 14 (Currently Amended)

The method ~~machine-readable medium~~ of claim 11, wherein said step of calculating includes using the relationship EXP [1/k $\sum k$ i=1 ln(t22 / t12)]; and wherein t1 = time to first failure during accelerated stress testing for previous design of the product, and t2 = time to first failure during accelerated stress testing for the product.

As per Claim 15 (Currently Amended)

The method ~~machine-readable medium~~ of claim 11, the method further comprising calculating a factor increase or decrease in the life of the product as compared to the life of the previous design of the product.

As per Claim 16 (Currently Amended)

The method ~~machine-readable medium~~ of claim 11, wherein the accelerated stress testing data is derived from a plurality of different stress tests.

As per Claim 17 (Currently Amended)

The method ~~machine-readable medium~~ of claim 16, wherein the different stress tests include a temperature test and a vibrational test.

As per Claim 18 (Currently Amended)

The method ~~machine-readable medium~~ of claim 11, wherein said step of calculating is performed during the design of the product.

As per Claim 19 (Currently Amended)

The method ~~machine-readable medium~~ of claim 11, wherein said step of calculating is performed prior to manufacturing the product for commercial use.

As per Claim 20 (Canceled)

As per Claim 21 (Currently Amended)

A ~~machine-readable medium storing computer-executable instructions to perform a~~ method of estimating a life of a product, the method comprising:

identifying a product defect,

determining accelerated stress testing data for the product using the relationship $tF = AF \times tA^2$, where tF = a failure time on a field use time scale, AF = an acceleration factor, and tA = failure time on an accelerated time scale, the accelerated stress testing data representing the response of the product operating in a first environment; and

calculating the mean time between failures (MTBF) for the product operating in a second environment based on the accelerated stress testing data,

wherein said first environment is more likely than the second environment to cause the product to fail; ~~and~~

wherein the accelerated stress testing data is derived from a plurality of different stress tests; and

correcting the product defect by redesigning the product and producing redesigned product.

As per Claim 22 (Currently Amended)

A ~~machine readable medium storing computer executable instructions to perform~~ a method of estimating a life of a product, the method comprising:

identifying a product defect,

determining accelerated stress testing data for the product using the relationship $tF = AF \times tA^2$, where tF = a failure time on a field use time scale, AF = an acceleration factor, and tA = failure time on an accelerated time scale, the accelerated stress testing data representing the response of the product operating in a first environment; and

calculating the mean time between failures (MTBF) for the product operating in a second environment based on the accelerated stress testing data,

wherein said first environment is more likely than the second environment to cause the product to fail; ~~and~~

wherein said accelerated stress testing data is determined at least in part from bill of materials (BOM) information on the product; and

correcting the product defect by redesigning the product and producing redesigned product.

Communications

4. Any inquiring concerning this communication or earlier communication from the examiner should be directed to Kibrom K. Gebresilassie whose telephone number is (571) 272-8571. The examiner can normally be reached on Monday-Friday, 8:30 am to 4:30 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner supervisor, Kamini S. Shah can be reached at (571) 272-2279. The official fax number is (571) 273-8300. Any inquiring of a general nature relating to the status of this application should be directed to the group receptionist whose telephone number is (571) 272-3700.

Kibrom K. Gebresilassie
AU 2128

KAMINI SHAH
SUPERVISORY PATENT EXAMINER